ENVIRONMENTAL STEWARDSHIP STRATEGIC OBJECTIVE

"Promote transportation solutions that enhance communities and protect the natural and built environment"

Outcomes

1) Reduced pollution and other adverse environmental effects of transportation and transportation facilities
2) Streamlined environmental review of transportation infrastructure projects

Strategies

Current trends in transportation are exerting pressure on environmental resources worldwide. In the U.S., commercial and personal travel has grown substantially in recent years and will continue to increase in the future. Americans want solutions to transportation problems but they want solutions that are consistent with sound environmental planning.

Secretary Mineta's Vision calls for a balance between environmental challenges and the need for a safe and efficient transportation network. Context-sensitive solutions are essential to get all of the players to work together to ensure that transportation decisions are fully respectful of communities and of environmental resources.

Our central strategy for achieving our environmental goals will be to work with our many stakeholders to implement President Bush's Executive Order 13274 concerning Environmental Stewardship. This Executive Order calls for a new way of doing business that brings together the timely delivery of transportation projects with the protection and enhancement of the environment. As pioneers in transportation, we will speed up the approval and completion of all vital transportation projects, consistent with the requirements of environmental law and our responsibilities to be good stewards of the environment.

The resources and programs listed in DOT's Annual Performance Plans and budgets are necessary to achieve our environment outcomes and execute our strategies. Each year DOT reassesses its performance goals based on appropriations. The schedule for executing the strategies presented below extends from the present through fiscal 2008.

<u>Leadership</u>

1) Exercise leadership in implementing President Bush's Executive Order 13274, "Environmental Stewardship and Transportation Infrastructure Project Reviews" by:
    a. Expediting environmental reviews of high-priority transportation infrastructure projects, and

b. Advancing environmental stewardship through cooperative actions with project sponsors to promote protection and enhancement of the natural and human environment in the planning, development, operation, and maintenance of transportation facilities and services. (Supports both outcomes)

2) Work proactively with government, industry and public interest groups in the U.S. and internationally to set environmental policies and standards and enforce environmental laws pertaining to transportation. (Supports both outcomes)

3) Support the President's Hydrogen Fuel Initiative through research on fuel distribution and delivery infrastructure, transportation of associated hazardous materials, and vehicle safety. (Supports outcome #1)

4) Create incentives to avoid, reduce or mitigate the adverse environmental effects that can accompany transportation services and facilities. (Supports both outcomes)

5) Encourage public involvement in the transportation planning process to improve the access of all Americans to transportation facilities and services. (Supports both outcomes)

6) Work proactively with Tribes, states, local governments, industry and all other transportation stakeholders to seek integrated approaches to resolving transportation issues while giving full consideration to local environmental conditions. (Supports both outcomes)

Building Expertise

7) Foster dialogue, education and communication about transportation alternatives and choices that improve compatibility between transportation and communities and encourage consideration of the full range of transportation options, including pedestrian and bicycle travel, to address mobility and environmental challenges. (Supports both outcomes)

8) Support interdisciplinary research on connections among transportation, energy and the environment. (Supports both outcomes)

9) Publish timely information on best practices in mitigating transportation's impact on communities and the human and natural environment using secure Web-based technologies. (Supports both outcomes)

10) Collaborate with State and local emergency responders to simulate or exercise emergency response plans concerning environmental incidents in transportation. (Supports outcome #1)

11) Invest in the capabilities of the DOT workforce by hiring individuals with education and experience related to the nexus of transportation, energy and the environment such as urban and regional planning, economic development, environmental sciences and environmental law. (Supports all outcomes)

Technology

12) Adopt transportation policies and promote technologies that do not contribute to environmental degradation. (Supports both outcomes)

13) Collaborate with federal agencies and the private sector to support and conduct research in technologies that improve energy efficiency, foster the use of alternative fuels, and reduce vehicle emissions. (Supports outcome #1)

14) Improve DOT-owned or controlled facilities for the benefit of host communities by preventing pollution, recycling, using recycled products, and cleaning up contaminated facilities. (Supports outcome #1)

15) Work with our transportation partners to mitigate the adverse environmental effects that presently occur from existing transportation systems. (Supports outcome #1)

Management Challenges

There are no management challenges listed by the GAO or the OIG pertaining to the Environmental Stewardship Strategic Objective.

Cross-Cutting Programs

DOT partners with several agencies involved in environmental stewardship to share transportation expertise and work to achieve mutual goals. Below we present an active partnership.

National Park Overflight

Goal: Implement policy concerning overflight of national parks that balances environmental and safety issues with the needs of air tour operators and others who fly over national parks. (Supports outcome 2)

Agencies Involved: DOT/Federal Aviation Administration lead, Department of Interior/National Park Service.

Perspective and Outlook

Current trends in transportation increase pressure on environmental resources and energy. Commercial and personal travel is expected to continue to increase. For example, annual vehicle miles traveled (VMT) on our Nation's highways has almost quadrupled since 1960 and is continuing to grow, increasing the strains on transportation infrastructure. Growth in VMT has far outstripped the growth in lane-miles, which have increased by only 10 percent since 1980.

Increased travel boosts transportation's energy consumption, creating challenges both in terms of supply and delivery via pipelines. Energy consumption is also tied to greenhouse gas (GHG) production, an emerging concern for the transportation sector,

which produces 26.8 percent of the GHG's emitted in the U.S. and is increasing emissions faster than any other sector. Finally, although transportation emissions of nearly all air pollutants are at their lowest levels in 30 years, continued growth in travel has caused a slight increase in nitrogen oxide emissions and continues to challenge efforts to reduce air pollutant emissions.

The transportation sector faces several challenges in environmental stewardship in coming years. Many of the challenges stem from a growing and increasingly mobile population and from a growing economy. Population growth will place a greater strain on the Nation's transportation infrastructure, increase demand for energy and increase the number of vehicles on the road, leading to air quality concerns. Suburban areas will likely absorb a disproportionate amount of the population growth, amplifying the growth effects and creating additional challenges with emissions, noise, and infrastructure. Diffuse growth also requires new infrastructure and building new infrastructure may create land use conflicts and disrupt ecosystems.

The economy is a driver of demand for transportation. Periods of economic growth strain the capacity of the transportation system leading to calls for expansion of ports, highways and airports. Finally, climate change will likely prove a challenge to the transportation sector, both in terms of adapting to impacts on the transportation system and to mitigating transportation-related greenhouse gas emissions. While these issues will form the core challenge to integrating environmental stewardship and transportation in the near future, other, unforeseen issues may also be factors. DOT looks forward to addressing these challenges.

External Factors

The relationship between transportation and the environment will play an important part of DOT's work in the future. The factors presented below may determine our ability to achieve our environmental outcomes.

Global warming could become more severe posing a variety of impediments to existing and new transportation infrastructure as coastal levels, runoff and an increase in weather severity. The result could be increased public pressure to reduce emissions from transportation sources.

Transportation faces a significant challenge to control and minimize air, water, and noise pollution or it may encounter a public backlash that may impede system improvement. There may be non-air quality environmental and social impacts resulting from otherwise desirous advances in low-to-no-emission transportation technologies (i.e., hybrid and fuel cell drive trains). With the advent of hybrids, air quality improves and people may drive more rather than less. With more driving may come increased pressure on land and water use, more congestion, and other adverse effects. Transportation planning should take this scenario into account.

Planning and development of transportation infrastructure that is resilient to environmentally caused damage (e.g. earthquakes, floods, etc.) is an increasing need

and a new challenge. It will support the reduction of transportation cost and trip time variance and improved transportation timeliness.

Advances in fuel cells and blended fuel engines for automobiles could take mileage up to 70-80 miles per gallon by the end of the decade. The availability of ultra-clean, hydrogen fuel cells for cars whose only by-product will be water clean enough to drink should reduce transportation's contribution to global climate change.

Traffic congestion and air quality are becoming major challenges that require solutions not only for our largest metropolitan areas, but for mid-size cities as well. Cities that were once considered the most-desired places to live or for businesses to locate are now seeking ways to unclog their increasingly congested roadways and regain their quality of life.

The role of National government is changing with an ongoing shift away from top down centralized decision-making and a shift towards increased state and local control of transportation. These trends could reverse if significant climate changes or if a rise in protectionism between international regional trading blocks were to occur.

The changing regulatory climate appears to be shifting toward minimizing National regulations, reducing international barriers to trade, and harmonizing international transportation regulations. This shift may limit DOT's ability to regulate pollutants produced by transportation sources.

The forces of agglomeration and urbanization that hold cities together may be affected by the nature of economic activity, potentially resulting in changes in the size and geographic distribution of urban areas, development of economically integrated regions and an increase in exposure to risks in the transportation system.

Transportation infrastructure additions or expansions may be limited due to environmental concerns, leading to increased travel times and user costs.

Changing demographics in the immigrant and the elderly populations will introduce new cultural norms that will affect the way communities form, organize and use transportation.

Crosswalk between Outcomes in the Strategic Plan and Performance Measures in Annual Performance Plans and Reports

Consistent with Secretary Mineta's emphasis on a *Smarter* DOT fully committed to accountability and results that benefit the taxpayers and the Nation, we will measure progress in achieving our environment outcomes through performance measures developed in DOT's Annual Performance Plans and Reports for fiscal years 2003-2008. DOT's Annual Performance Plans and Reports contain details on the scope, source, limitations and statistical issues for each performance measure. Table 4 below presents a crosswalk between outcomes and candidate performance measures.

Table 4. Environment Outcomes and Candidate Performance Measures

Outcomes	Candidate Performance Measures
Reduced pollution and other adverse environmental effects of transportation and transportation facilities	<u>Reduced pollution and adverse effects</u> Ratio of wetland acres replaced per acre unavoidably affected by Federal-aid Highway projects Number of people exposed to significant aircraft noise levels Number of people in residential communities benefiting from federally funded aviation noise compatibility projects <u>Improved performance</u> Tons of hazardous liquid materials spilled per million ton-miles shipped by pipeline 12 month moving average number of area transportation emissions conformity lapses Percentage of DOT facilities characterized as No Further Remedial Action Planned under the Superfund Amendments and Reauthorization Act
Streamlined environmental review of transportation infrastructure projects	<u>Streamlined Review</u> Measure of progress implementing Executive Order 13274, "Environmental Stewardship and Transportation Infrastructure Reviews"